

REMARKS

I. Status of Claims

Claims 1, 2, 5, 6 and 10 have been amended. Claims 3-4 and 8-9 have been canceled.

II. Double Patenting Rejection

The Examiner rejects claims 1-10 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-35 of Yun et al. (U.S. Patent Number 6,888,901, hereinafter "Yun").

Embodiments of the present invention and Yun both provide an apparatus and method to stop iterative decoding caused by an occurrence of an error in a CDMA mobile communication system. More specifically, they stop iterative decoding since timing of the iterative decoding is a significant factor in reducing the decoding time and they minimize the power consumption in iterative decoding used in turbo codes.

However, Yun provides a basis for stopping turbo decoding by combining CRC and the minimum absolute LLR value. In contrast, embodiments of the present invention provide a novel stopping criterion by combining MAL and SDR, wherein the novel stopping criterion minimizes hardware and easily determines the threshold.

That is, the present application and Yun have the same field, problem and object. However, the methods for achieving the objects are different from each other. These differences are clearly illustrated in Figure 3 of Yun and Figure 1 of the present application which illustrate the configuration of the turbo decoder applied to each of the stopping criteria.

A comparison of the existing claim set of the present application with Yun illustrates these distinctions. In the present claims, there is a technical feature of "a threshold detector for detecting a threshold comprising a number of different signs of a-priori information and

extrinsic information for the symbols”, whereas there is no technical feature of detecting threshold T1(i), T2(i), Tf and Td, since they are predetermined values.

More specifically, a comparison of the independent claims 1 and 6 with the claims of Yun shows that embodiments of the present invention are similar to Yun in view of detecting the minimum of the absolute reliabilities as a measurement, comparing the measurement with the threshold, and outputting the iterative decoding stop command if the measurement exceeds the threshold.

However, the present application claims a threshold detector and a threshold detecting method for detecting the threshold comprising a number of different signs of a priori information and extrinsic information for the symbols. In addition, the present application claims the configuration of the threshold detector for detecting the threshold and the steps of detection threshold.

On the contrary, Yun discloses using the first threshold determined by the minimum absolute LLR value output by prior iterative decoding. The first threshold is determined by adding a preset adding factor Tf to the minimum value F. However there is no disclosure in Yun of the threshold detector and its configuration as in the present application.

As stated above, the present application has its own technical features of “a threshold detector” and “method for determining the threshold for stop criterion. Accordingly, Applicants respectfully request that the double patenting rejection corresponding to Yun be reconsidered and withdrawn.

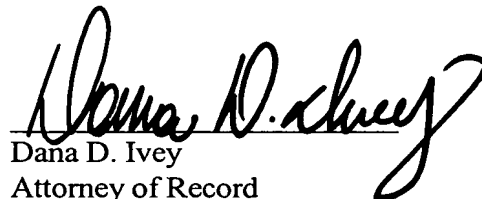
CONCLUSION

Applicants submit that such arguments are fully responsive to the Office Action dated November 24, 2006 and respectfully requests the asserted grounds of rejections be withdrawn based on such arguments.

In view of the above, it is believed that the above-identified application is in condition for allowance, and notice to that effect is respectfully requested. Should the Examiner have

any questions, the Examiner is encouraged to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Dana D. Ivey", written over a horizontal line.

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